

material used. The support members 230 serve to ensure proper spacing of the columns and rows, and also to provide additional strength and rigidity to the finished part. When filled with optical fibers, not shown, this particular embodiment produces a perfect shuffle in that the individual fibers of row 1 from columns 1-8 are brought together in column 1, rows 1-8 of the output end. The fibers of input row 2, columns 1-8 are shuffled to be arranged in column 2, rows 1-8 of the output end and so forth, with the fibers of row 8, columns 1-8 being shuffled into column 8, rows 1-8 of the output end of the manifold. It is to be noted that the CAD system has been programmed to ensure that none of the individual fibers are forced to experience a bend tighter than the critical bend radius, thereby minimizing optical signal loss and maximizing mechanical life span for each of the fibers passing through the optical manifold.

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In accordance with 27 CFR 1.121, a marked up version showing the changes made is attached.